

A2 Sub B1 > 3. (Amended) The method as recited in claim 2 wherein the reducing of the importance level of the line results in the line being replaced prior to an other line scheduled for replacement by a replacement policy of the cache.

4. (Amended) The method as recited in claim 3 wherein the replacement policy is a least recently used policy and wherein said other line is less recently used than the line.

A7 Sub B1 > 6. (Amended) The method as recited in claim 1 wherein the instruction is part of an application kernel.

A4 Sub B1 > 9. (Amended) An instruction for increasing hit rate of a cache, the instruction comprising an indication that a line storing valid data in a memory of the cache is a candidate for replacement by reducing an importance level of the line.

A5 Sub B1 > 11. (Amended) The instruction as recited in claim 10 wherein the reducing of the importance level of the line results in the line being replaced prior to an other line scheduled for replacement by a replacement policy of the cache.

12. (Amended) The instruction as recited in claim 11 wherein the replacement policy is a least recently used policy and wherein said other line is less recently used than the line.

A6 Sub B1 > 17. (Amended) An article comprising a storage medium, the storage medium having a set of instructions, the set of instructions being capable of being executed by at least one processor to implement a method for controlling a cache, the set of instructions when executed comprising providing an indication to the cache that a line storing valid data in the cache is a candidate for replacement by reducing an importance level of the line.

A7 Sub B1 > 19. (Amended) The article as recited in claim 18 wherein the reducing of the importance level of the line results in the line being replaced prior to an other line scheduled for replacement by a replacement policy of the cache.

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20. (Amended) The article as recited in claim 19 wherein the replacement policy is a least recently used policy and wherein said other line is less recently used than the line.

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25. (Amended) A cache comprising:
a cache memory including a cache line storing valid data; and
a cache control logic for reducing an importance level of the cache line based on an instruction.

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30. (Amended) A method for controlling a cache, comprising:
providing an instruction to the cache indicating that a line storing valid data is a candidate for replacement by reducing an importance level of the line; and
reducing an importance level of the line based on the instruction.

Attached hereto is a marked-up version of the changes made to the claim by the current amendment. The attached page is captioned "Version with Markings to Show Changes Made."